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(12) United States Patent Speer

(54) COMPOSITE PANEL HAVING PERFORATED FOAM CORE AND METHOD OF MAKING THE SAME

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(56) References Cited

U.S. PATENT DOCUMENTS

2,294,930 A 9/1942 Palmquist 3,420,023 A 1/1969 Gregori (Continued)

FOREIGN PATENT DOCUMENTS

CA 2165016 6/1996 JP 3-87461 4/1991 (Continued)

OTHER PUBLICATIONS

Non-Final Rejection dated Sep. 1, 2009, for U.S. Appl. No. 11/859,014, 8 pages.

(Continued)

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(57) ABSTRACT

A composite panel configured for use with a sidewall of a trailer includes an outer metal sheet, an inner metal sheet, and a core member positioned between the inner and outer metal sheets. The core member includes a plurality of apertures formed therethrough such that each aperture extends from an inner surface of the core member to an outer surface of the core member. Illustratively, the plurality of apertures is covered by the inner and outer metal sheets.

16 Claims, 12 Drawing Sheets

